

Application No.: 09/479,736
Reply to Office Action of October 18, 2005
Amendment Dated January 4, 2006

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A system for providing real-time voice communication between devices connected to an Internet Protocol (IP) network and devices connected to a public switched telephone network (PSTN), comprising:

a computer controlled switch operable for use by subscribers and adapted for connection to a local public switched telephone network and capable of receiving calls from the IP network and or the PSTN and routing calls to the PSTN and the or IP network; and

gate interface circuitry connected to the computer controlled switch and adapted for connection to the IP network;

said computing controlled switch containing, for each subscriber, destination addresses on the PSTN and the IP network;

whereby calls to a subscriber received by the computer controlled switch are automatically routed to each destination address on the PSTN or the IP network for that subscriber.

2. (Original) The system of claim 1 wherein said gate interface circuitry includes gateway circuitry for interfacing between the IP network and the voice circuits of the PSTN, and gatekeeper circuitry for performing address translation, admission control, bandwidth management and zone management between the IP network and the PSTN.

3: (Original) The system of claim 2, further comprising:

a voice response unit connected between the gate interface circuitry and the switch for receiving voice signals and converting them to digital tones for the switch.

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4. (Original) The system of claim 3, further comprising a message system connected to the IP network and the switch.
5. (Original) The system of claim 4 where said message system receives voices messages and converts them to e-mail messages.
6. (Original) The system of claim 5 wherein said message system receives facsimile messages and converts them to e-mail messages.
7. (Original) The system of claim 6 wherein said message system receives e-mail messages and converts them to voice messages.
8. (Original) The system of claim 7, wherein the devices connected to the IP network are computers or telephones with a gateway circuitry interface.
9. (Original) The system of claim 8 wherein the computers connected to the IP network include multi-media software for packetizing voice signals into a digital format for transmission over the IP network.
10. (Canceled)
11. (Previously Presented) The system of claim 1, wherein said computer controlled switch receives an incoming call from the IP network or the PSTN and simultaneously routes the call to a plurality of pre-designated destination addresses which may be on the IP network, on the PSTN, or on both the IP network and the PSTN.

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12. (Original) The system of claim 11 wherein said computer controlled switch performs caller identification functions after routing the incoming call.
13. (Original) The system of claim 1 wherein said computer controlled switch performs Class 5 switching of incoming calls.

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14. (Currently Amended) A method of providing real-time voice communication between devices connected to an Internet Protocol (IP) network and devices connected to the public switched telephone network (PSTN), the steps of the method comprising:

interfacing the digital data signals of the IP network with the voice signals of the PSTN;

interfacing the control signals of the IP network with the PSTN to perform address translation, admission control, bandwidth management and zone management;

routing calls between the devices connected to the IP network and devices connected to the PSTN;

maintaining information corresponding to subscribers;

storing for each individual subscriber destination addresses on the PSTN and the IP network;

and

automatically routing calls to a subscriber to each destination address stored for that subscriber.

15. (Original) The method of claim 14, further comprising receiving voice signals from the IP network and converting them to signals for use by the PSTN.

16. (Original) The method of claim 14, further comprising receiving voice messages and converting them to e-mail messages.

17. (Original) The method of claim 14, further comprising receiving facsimile messages and converting them to e-mail messages.

18. (Original) The method of claim 14, further comprising receiving e-mail messages and converting them to voice messages.

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19. (Original) The method of claim 14, further comprising receiving an incoming call from the IP network or the PSTN network and simultaneously routing the call to a plurality of predesignated destinations which may be on the IP network, on the PSTN network, or on both the IP network and the PSTN network.

20. (Original) The method of claim 19, further comprising performing caller identification functions after routing the incoming call.

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21. (New) A system for providing real-time voice communication between devices connected to an Internet Protocol (IP) network and devices connected to a public switched telephone network (PSTN), comprising:

a computer controlled switch adapted for connection to a local public switched telephone network and capable of receiving calls from the IP network and the PSTN and routing calls to the PSTN and IP network; and

gate interface circuitry connected to the computer controlled switch and adapted for connection to the IP network,

wherein the computer controlled switch is operable to simultaneously route a received call to a plurality of pre-designated destination addresses comprising one or more IP address and one or more PSTN numbers.

22. (New) The system of claim 21, wherein said computer controlled switch is operable to perform Class 5 switching of incoming calls.

23. (New) The system of claim 21 wherein said gate interface circuitry includes gateway circuitry for interfacing between the IP network and the voice circuits of the PSTN, and gatekeeper circuitry for performing address translation, admission control, bandwidth management and zone management between the IP network and the PSTN.

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24. (New) A method of providing real-time voice communication between devices connected to an Internet Protocol (IP) network and devices connected to the public switched telephone network (PSTN), the method comprising:

- interfacing the IP network and the PSTN;
- receiving a call originating from a source selected from the group consisting of the IP network and the PSTN; and
- routing the call simultaneously to a plurality of predesignated destination addresses comprising one or more IP address and one or more PSTN numbers.

25. (New) The method of claim 24, further including performing class 5 switching of the received call.

26. (New) The method of claim 24, further including performing address translation, admission control, bandwidth management and zone management between the IP network and the PSTN.

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27. (New) A system for providing real-time voice communication between devices connected to an Internet Protocol (IP) network and devices connected to a public switched telephone network (PSTN), comprising:

a computer controlled class 5 switch adapted for connection to a local public switched telephone network and capable of receiving calls from the IP network and the PSTN and routing calls to the PSTN and the IP network; and

gate interface circuitry connected to the computer controlled switch and adapted for connection to the IP network.

28. (New) The system of claim 27, wherein the class 5 switch is operable to route a call originating from any one of a plurality of local PSTNs to the IP network.

29. (New) The system of claim 27, wherein the class 5 switch is operable to route a call originating from a phone coupled with a conventional private branch exchange (PBX) to the IP network.

30. (New) The system of claim 27, wherein the class 5 switch is operable to route a call originating from a phone coupled with non-private branch exchange elements to the IP network.

31. (New) The system of claim 27, wherein the class 5 switch is operable to-
route subscriber calls between the IP network and the PSTN, and
prohibit routing of non-subscriber calls between the IP network and the PSTN.

32. (New) The system of claim 27, wherein the class 5 switch is operable to route a call originating from the IP network to a phone coupled with a conventional private branch exchange (PBX).

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33. (New) The system of claim 27, wherein the class 5 switch is operable to route a call originating from the IP network to a phone coupled with non-private branch exchange elements.
34. (New) The system of claim 27, wherein the class 5 switch is operable to simultaneously route a received call to a plurality of pre-designated destination addresses.

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35. (New) A method of providing real-time voice communication between devices connected to an Internet Protocol (IP) network and devices connected to the public switched telephone network (PSTN), the method comprising:

receiving calls from the IP network and the PSTN utilizing a class-5 switch; and
in the class-5 switch, routing the calls to the PSTN and the IP network respectively,
wherein calls to or from the IP network pass through gate interface circuitry that is connected
to the class-5 switch and adapted for connection to the IP network.

36. (New) The method of claim 35, further including-

routing subscriber calls between the IP network and the PSTN, and
prohibiting routing of non-subscriber calls between the IP network and the PSTN.

37. (New) The method of claim 35, further including simultaneously routing a received call
to a plurality of pre-designated destination addresses.

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38. (New) A system including:

a telephone; and

a gateway coupled with the telephone, the gateway operable to couple with a computer controlled switch through an Internet Protocol (IP) network to enable the telephone to communicate through the IP network and a public switched telephone network (PSTN).

39. (New) The system of claim 38, wherein the computer controlled switch is a class 5 switch.

40. (New) The system of claim 38, wherein the computer controlled switch is coupled with gate interface circuitry to facilitate communication through the PSTN.

41. (New) The system of claim 38, wherein the computer controlled switch is operable for use by subscribers and the gateway is operable to provide subscriber information to the switch.